

## Marine Life Protection Act Initiative



### Size and Spacing Evaluations of the Round 3 NCRSG MPA Proposal for the North Coast Study Region

Presentation to the MLPA Blue Ribbon Task Force  
October 25, 2010 • Fortuna, CA

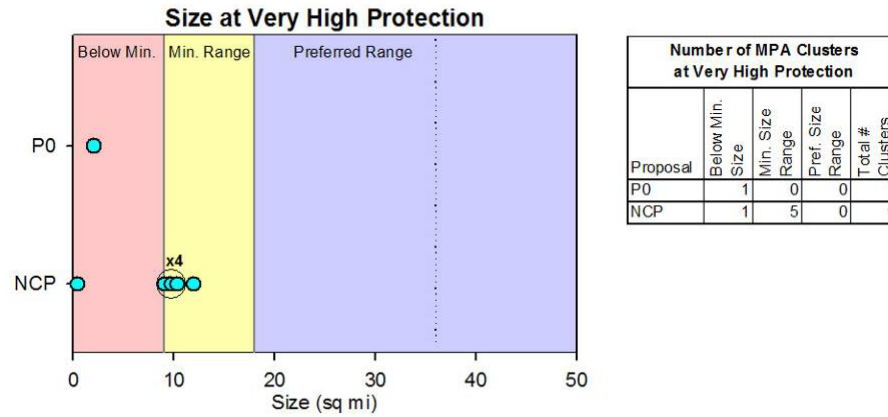
Dr. Mark Carr, Co-chair • MLPA Master Plan Science Advisory Team

## Notes on Round 3 Evaluations



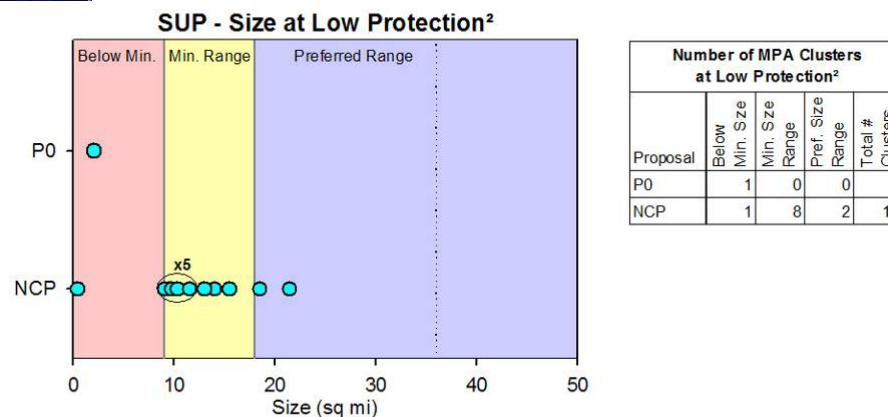
- **Results presented for very high protection MPAs:**
  - **No high protection MPAs** were included in the Round 3 NCRSG MPA proposal (NCP), thus evaluations at high protection are omitted from all evaluation materials
  - **Only one mod-high protection MPA** proposed, thus evaluations at mod-high protection are omitted from this presentation but included in other evaluation materials
- **Supplemental evaluation** (abbreviated SUP) requested by MLPA Blue Ribbon Task Force includes:
  - All MPAs or state marine recreational management areas (SMRMAs) at **moderate-high protection or above**
  - MPAs **below moderate-high protection** if the **only** proposed uses that reduced level of protection (LOP) below moderate-high were those intended to accommodate tribal uses

## Cluster Sizes: Very High Protection



- At very high protection, most MPAs are within the minimum size range and no MPAs are within the preferred size range
- At moderate-high protection (not shown) one MPA within the minimum size range is added

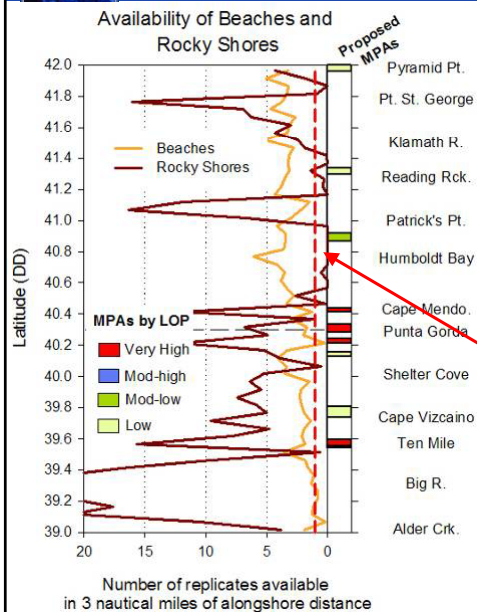
## Cluster Sizes: Supplemental Evaluation



- In supplemental evaluation, several MPA clusters increase in size and two MPA clusters fall within the preferred size range

<sup>2</sup> Supplemental evaluations include MPAs at moderate-low and low LOP due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection.

## Habitat Distribution in the NCSR



Replicates of beach habitat are available throughout the NCSR.

Replicates of rocky shore habitat are available along most sections of coast, with the exception of the area near Humboldt Bay.

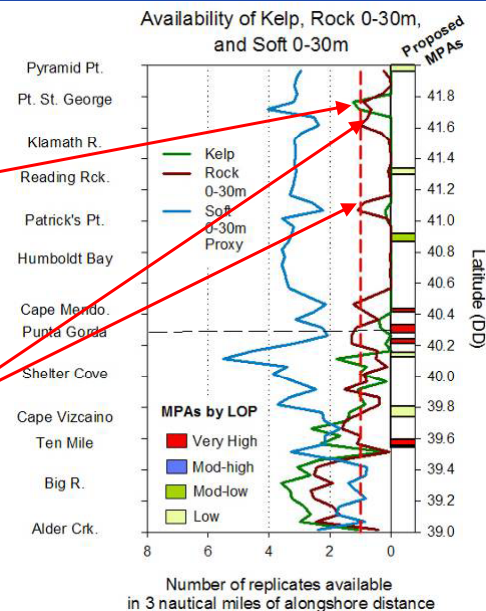
Most MPAs include sufficient amounts of these habitats for replication.

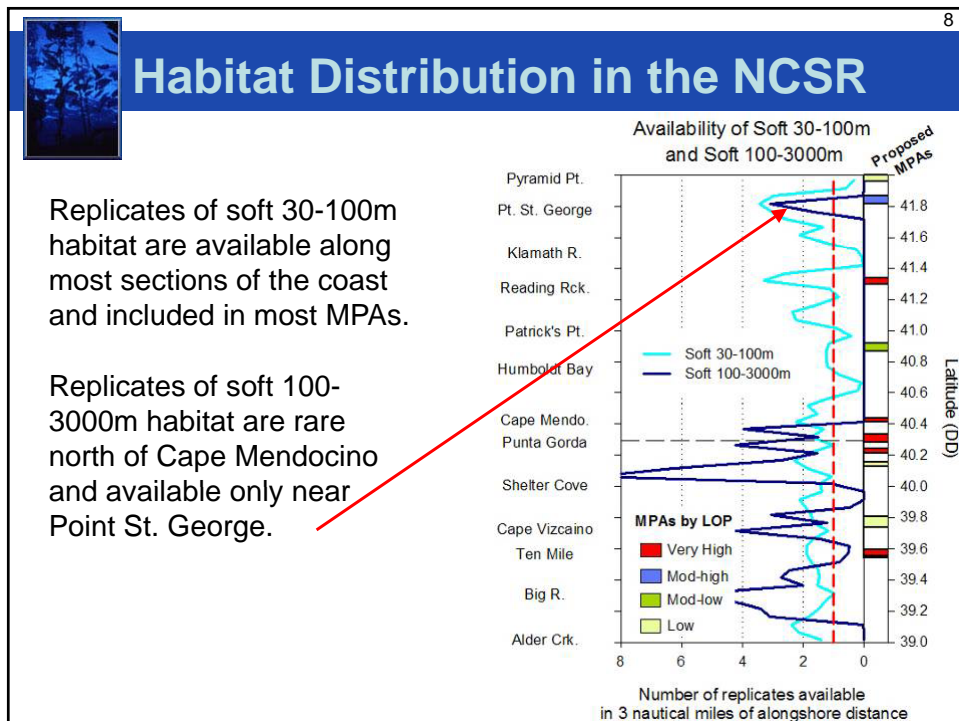
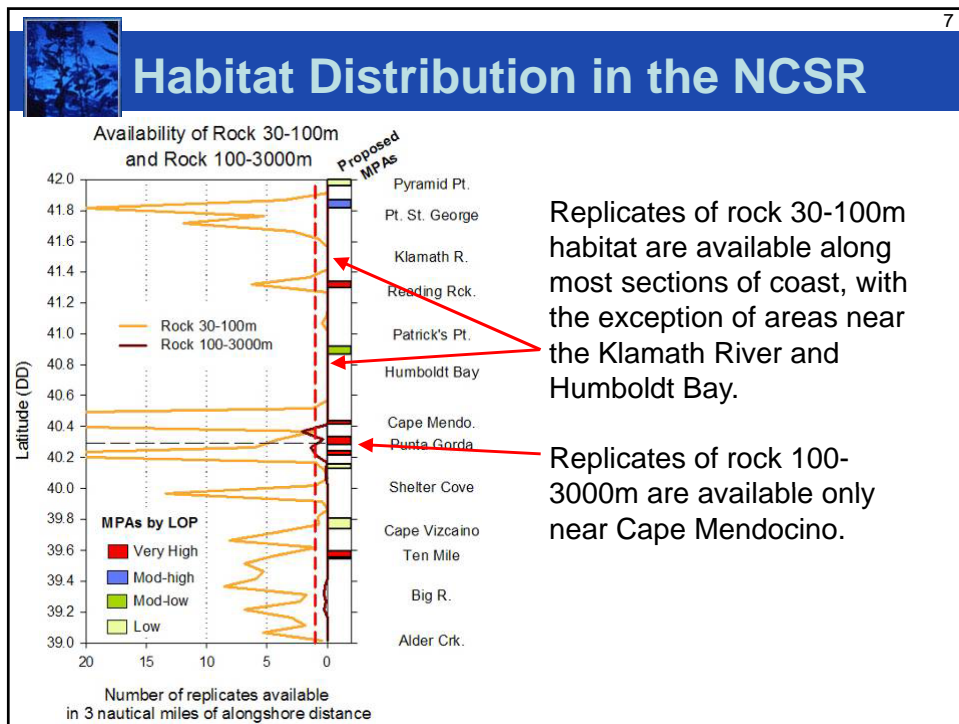
## Habitat Distribution in the NCSR

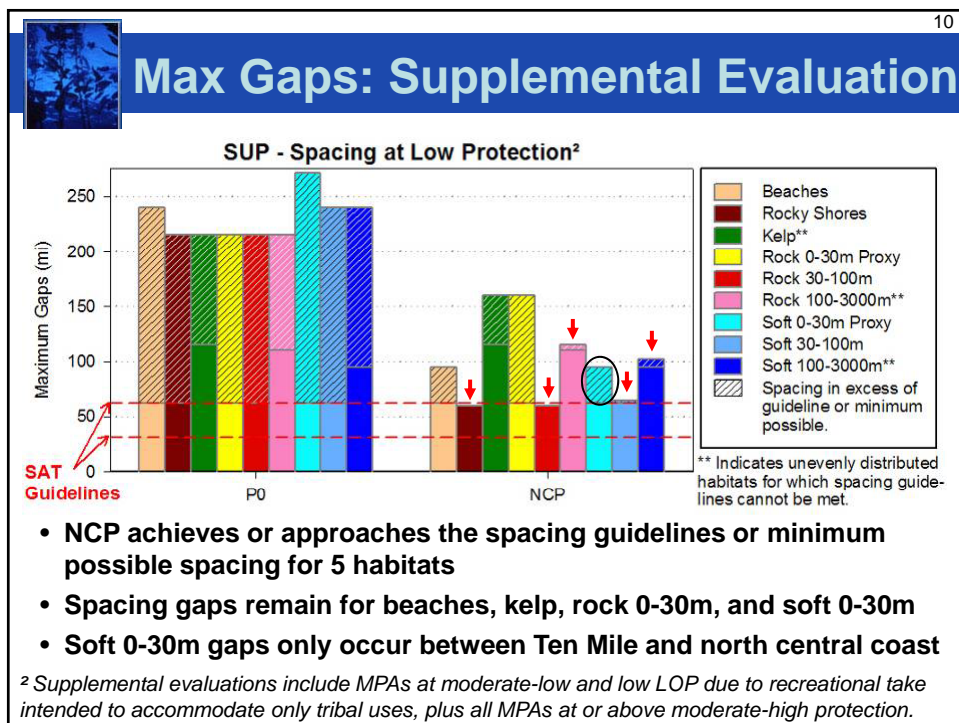
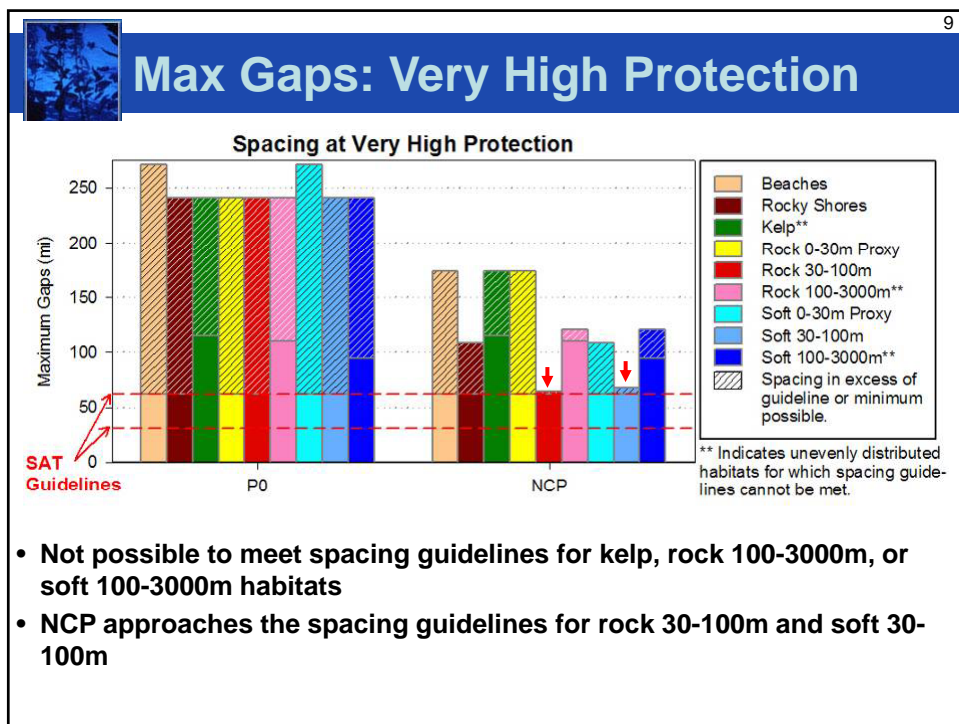
Replicates of kelp habitat are rare north of Shelter Cove and available only near Crescent City.

Replicates of rock 0-30m habitat are rare north of Cape Mendocino and available only near Crescent City and Trinidad.

Replicates of soft 0-30m habitat are available throughout the NCSR.

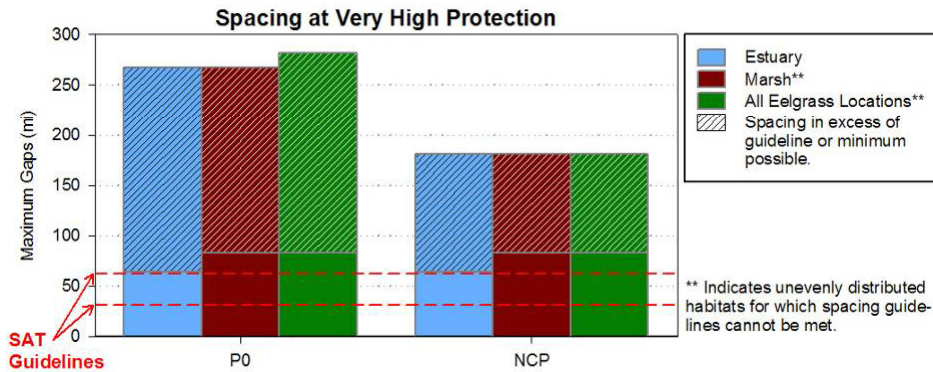






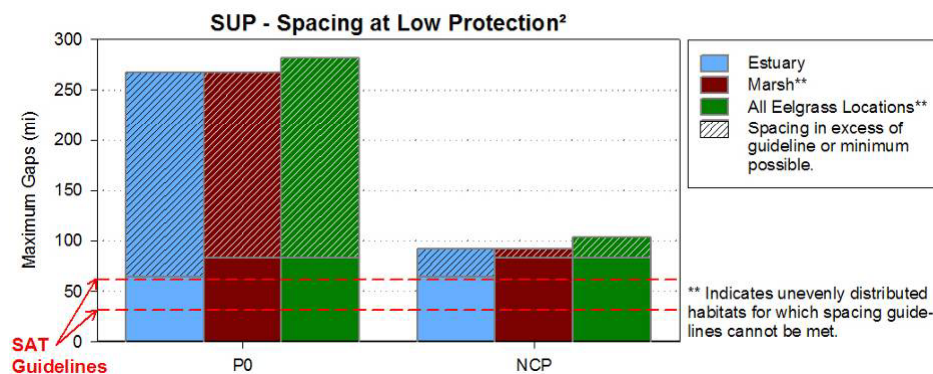


## Estuarine Spacing: Very High Protection



- Not possible to meet spacing guidelines for marsh or eelgrass habitats due to uneven distribution of habitats
- All estuarine habitats replicated only at Ten Mile estuary, thus largest gaps extend from Ten Mile estuary north to Oregon

## Estuarine Spacing: Supplemental Evaluation



- NCP approaches minimum possible spacing for marsh habitat
- Largest spacing gaps for estuary and eelgrass extend from Ten Mile estuary to replicates in the north central coast (at Russian River and Estero Americano respectively).

<sup>2</sup> Supplemental evaluations include MPAs at moderate-low and low LOP due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection.



## Size and Spacing Summary

### Guidelines Achieved



#### At or above mod-high protection:

- All but one MPA within the minimum size range
- NCP achieves or approaches guidelines or minimum possible spacing for 3 habitats: rock 30-100m, rock 100-3000m, and soft 30-100m



#### Supplemental evaluation<sup>2</sup>:

- All but one MPA within the minimum or preferred size range
- Two MPAs in the preferred size range
- NCP achieves or approaches guidelines or minimum possible spacing for 5 habitats: rocky shores, rock 30-100m, rock 100-3000m, soft 30-100m, and soft 100-3000m

<sup>2</sup> Supplemental evaluations include MPAs at moderate-low and low LOP due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection.



## Size and Spacing Summary

### Guidelines Not Achieved



#### At or above mod-high protection:

- No MPAs within the preferred size range
- Spacing gaps for 9 of 12 key habitats substantially exceed the guidelines or minimum possible spacing: beaches, rocky shores, kelp, rock 0-30m, soft 0-30m, soft 100-3000m, estuary, marsh and eelgrass



#### Supplemental evaluation<sup>2</sup>:

- Spacing gaps for 6 of 12 key habitats substantially exceed the guidelines or minimum possible spacing: beaches, kelp, rock 0-30m, soft 0-30m, estuary and eelgrass.

<sup>2</sup> Supplemental evaluations include MPAs at moderate-low and low protection due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection.



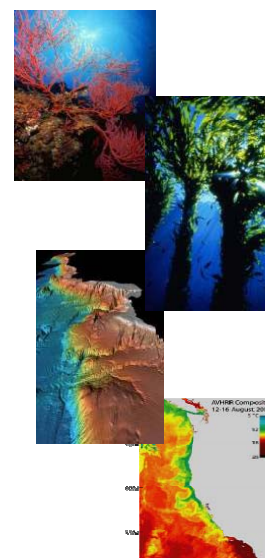
## Background Information

The following slides include background information that will not be presented.



## MLPA Goals\*: Populations

1. To protect the natural diversity and function of **marine ecosystems**.
2. To help sustain and restore **marine life populations**.
3. To improve **recreational, educational, and study opportunities** in areas with minimal human disturbance.
4. To protect representative and unique **marine life habitats**.
5. Clear objectives, effective management, adequate enforcement, sound science.
6. To ensure that MPAs are designed and managed as **a network**.



\* Note that this language represents a summary of the MLPA goals





## Design Guidelines: Goals 2 and 6



**MPAs should be placed within 50-100 kilometers (31-62 miles) of each other** to facilitate dispersal and connectedness of important bottom-dwelling fish and invertebrate groups among MPAs.



Because many populations are habitat-specific, spacing is evaluated for each habitat.



## Spacing to Existing MPAs in NCCSR



Spacing is calculated to the nearest protected habitat to the south (in north central coast MPAs)



Recent changes to the Stewarts Point SMR and correction of previous errors add 30 miles to spacing for beach and soft 0-30m habitat

- Nearest beach and soft 0-30m habitat replicates are at Bodega Head SMR, approximately 58 miles south of north coast study region boundary



## Spacing: Unevenly Distributed Habitats

- For some unevenly distributed habitats, spacing guidelines are impossible to meet.
- Minimum possible spacing for these habitats:
  - Kelp:** 115 miles (mi)
  - Deep soft bottom** (100-3000m): **95 mi**
  - Deep rock** (100-3000m): **110 mi**  
only available in one area in the NCSR

